

CLAIMS

Having thus described my invention, I claim:

1. A structural reflective insulating material comprising:
 - 2 a first outer layer of metal foil;
 - 3 an adhesive binding coating material on an inner side of said first outer
 - 4 layer of reflective foil;
 - 5 at least a first layer of foam material secured to said first layer of said
 - 6 reflective foil;
 - 7 at least one layer of mesh material sandwiched between at least said first
 - 8 layer of foam material and at least a second layer of foam material;
 - 9 at least a second layer of foam material;
 - 10 a coating or adhesive binding material between at least a second layer
 - 11 of foam material and at least a second inner layer of reflective foil; and
 - 12 at least a second layer of reflective foil bound to at least a second layer
 - 13 of foam material by the adhesive binding material.
1. The structural reflective insulating material of claim 1 wherein at least
2 one of said first outer and second inner layers of reflective ~~foil~~ is aluminum.
1. The structural reflective insulating material of claim 1 wherein at least
2 one of the first and second layers of foam material comprise polyethylene foam.
1. The structural reflective insulating material of claim 2 wherein at least
2 one of the first and second layers of foam material comprise polyethylene foam.

foil
adhesive
foam
mesh
foam
adhesive
foil

1 5. The structural reflective insulating material of claim 1 wherein the
2 coating of adhesive binding material is polyurethane.

1 6. The structural reflective insulating material of claim 2 wherein the
2 coating of adhesive binding material is polyurethane.

1 7. The structural reflective insulating material of claim 3 wherein the
2 coating of adhesive binding material is polyurethane.

1 8. The structural reflective insulating material of claim 4 wherein the
2 coating of adhesive binding material is polyurethane.

1 9. The structural reflective insulating material of claim 1 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 10. The structural reflective insulating material of claim 2 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 11. The structural reflective insulating material of claim 3 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 12. The structural reflective insulating material of claim 4 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 13. The structural reflective insulating material of claim 5 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 14. The structural reflective insulating material of claim 6 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

1 15. The structural reflective insulating material of claim 7 wherein the mesh
2 material is one from a group consisting of aluminum or galvanized steel.

16. The structural reflective insulating material of claim 8 wherein the mesh
material is one from a group consisting of aluminum or galvanized steel.

17. A method of manufacturing a structural reflective insulating material comprising the steps of:

coating a first layer of reflective foil on one side with an adhesive

binding material;

placing a first layer of foam material against the coating;

laying a me

placing a second layer of foam material over the mesh ma

coating a second layer of reflective foil on one side with

is a binding material:

adhesive binding material,

placing the second layer of reflective foil with the side coated with an adhesive binding material against the second layer of foam material; and

running the material through a heat press to bind all layers of material together to form an integral structural reflective insulating material.

18. A method of making an air duct from a structural reflective insulating material comprised of a first outer layer of reflective foil; an adhesive binding coating material on an inner side of said first outer layer of reflective foil; at least a first layer of foam material secured to said first layer of said reflective foil; at least one layer of mesh material sandwiched between at least said first layer of foam material and at least a second layer of foam material; at least a second layer of foam material; a coating or adhesive binding material between the at least a second layer of foam material and the at least a second inner layer of reflective foil; and the at least a second inner layer of reflective foil, comprising the steps of;

folding a piece of the structural reflective insulating material as many times as necessary so that ends of the piece form a channel; and securing the ends together by securing means to form a desired configuration.

1 19. The method of forming the air duct in claim 18 wherein the securing
2 means consists of metallic tape.

1 20. The method of forming the air duct in claim 18 wherein the desired
2 configuration is substantially rectangular. 

1 21. The method of forming the air duct in claim 18 wherein the desired
2 configuration is substantially circular. 

1 22. The method of forming the air duct of claim 21 wherein the securing
2 means further comprises an inward curved hook on one end of the material and an
3 outward curved hook on a second end, said curved hooks being interconnected to
4 lock the duct in the substantially circular configuration.

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